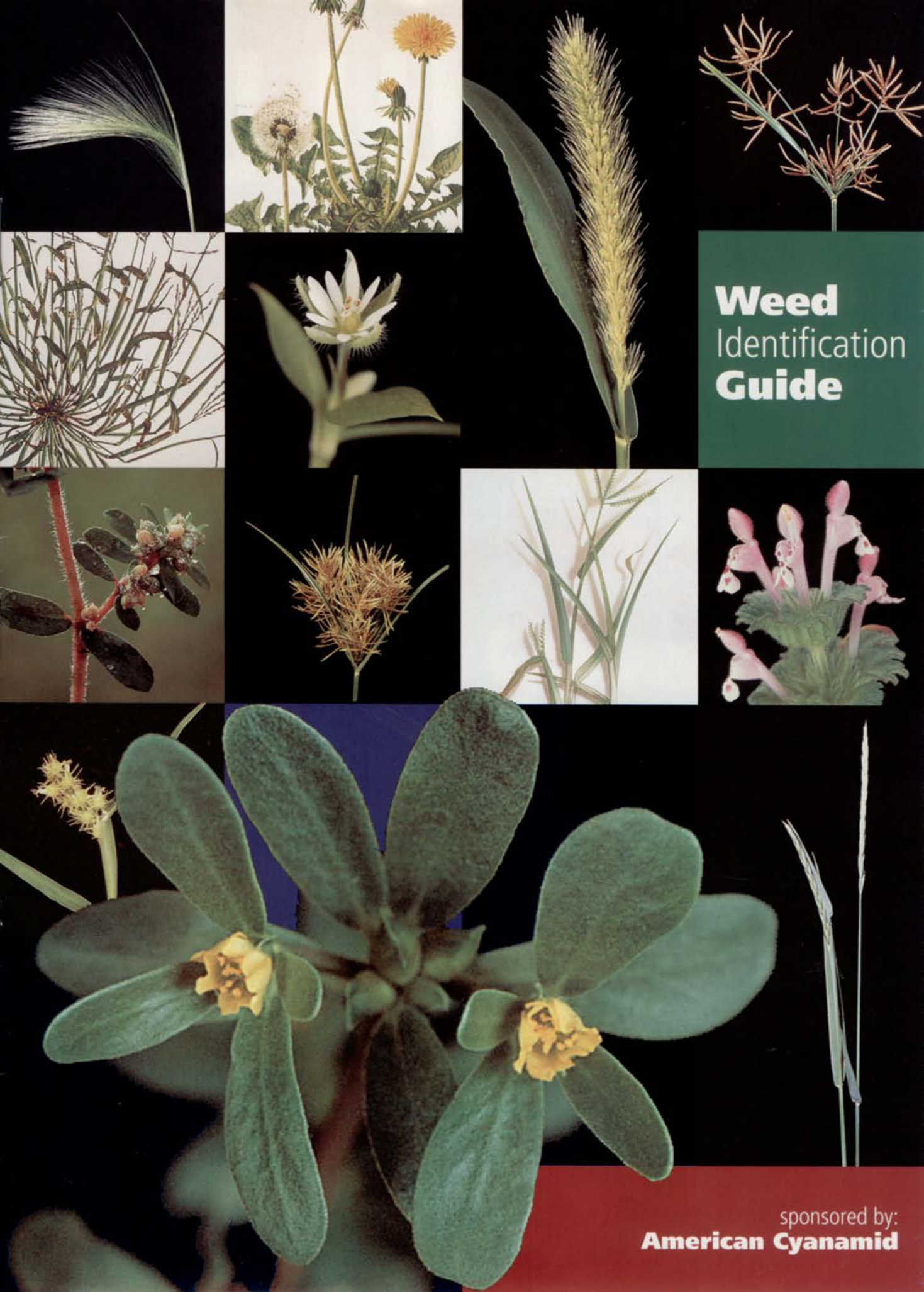

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INTRODUCTION

Successful weed identification is a combination of timing and user-friendly data. Timing in relation to the maturity of the plant (the older, the easier) and user-friendly data, meaning an identification guide that is designed to facilitate the identification process. Both were considered in the design of this guide.

Timing: When identifying either monocot (grassy) weeds or dicot (broadleaf) weeds, studying a mature or flowering sample is very important. All of the most easily identifiable traits—flowers, seeds, leaves and roots—are present then, so take some time to find a mature specimen to examine.

User-friendly data: For ease of use, this guide concentrates on those plant characteristics that differentiate one species from another rather than those traits each has in common. These differences are represented visually with added text to refine the distinctions between similar plants.

Understanding the terms used in this guide

Understanding the parts of a grass plant are essential to accurately identify monocot weeds. In the example shown, pay particular attention to the seedhead, the ligule and the collar. They are the plant parts which have the most differentiating traits.

Abbreviations

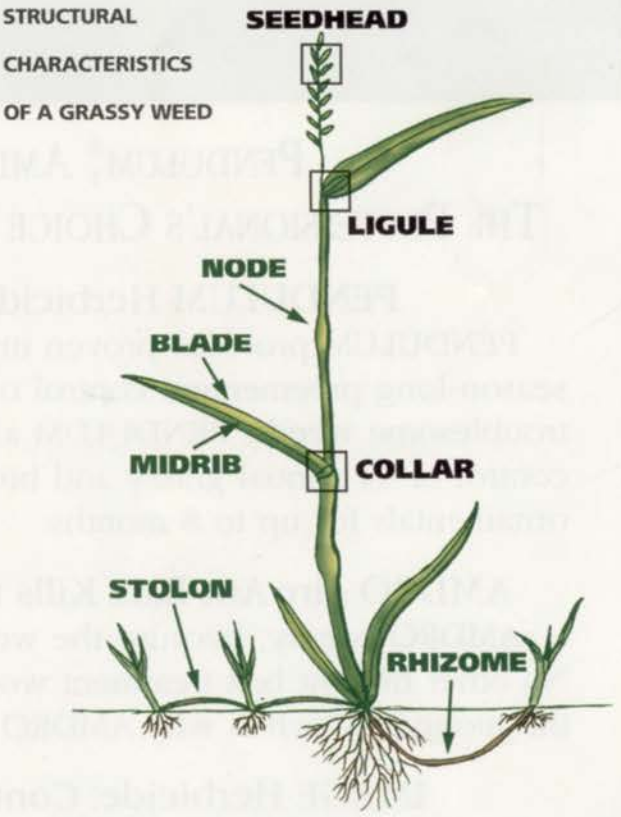
aka = "also known as" (different common names are popular in different parts of the U.S.)

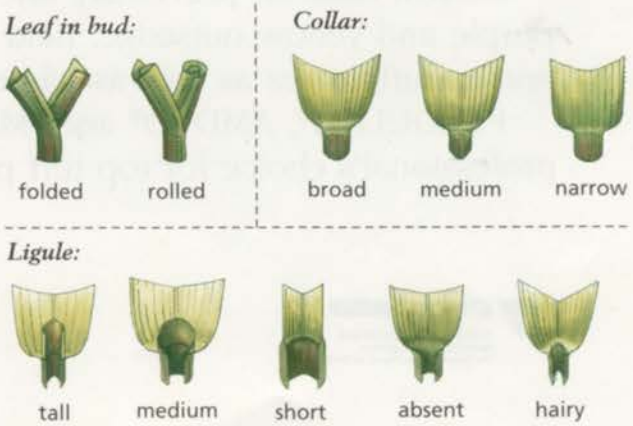
Further help

The use of this guide was designed to help managers substantially reduce the number of possible weed species identifications. However, variations in a plant's vegetative characteristics or distribution may require that managers forward samples to their local extension service for confirmation. American Cyanamid's local technical representatives can also be contacted for further help.

Sources

Information was compiled from the Scotts "Guide to the Identification of Grasses," the Southern Weed Science Society's "Weed Identification Guide," A.S. Hitchcock's "Manual of the Grasses of the United States" and the extension department at Cornell University.





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Monocot weeds

Because of natural variations within grasses and differences that occur under varying environments, the illustrations included herein are meant to be representative but not definitive. Users need to consider all of the information—seedhead, in-bud, ligule, collar, descriptive text, tips and distribution—to accurately identify a weed.

As you proceed, keep in mind that you should not rely on an individual characteristic to be conclusive, rather total the number of similar characteristics between the sample and the guide to help narrow the number of possibilities.

The monocot weed species illustrated herein were selected for their likelihood of appearing in turf and their latest reported distribution.

Identifying a monocot weed

Once a mature sample has been selected, check each of the listed plant parts as follows:

- seedhead—size, shape, openness and number, size and shape of branches and seeds
- in-bud—cut through a leaf stem and determine if it is folded or rolled
- ligule—remove a leaf from its stem and with a hand lens check the size, shape and texture
- collar—lay the leaf flat, underside up and check the size, shape and top and bottom edges
- tips—check for additional vegetative plant characteristics
- distribution—confirm that this weed species has been identified in your state

ANNUAL BLUEGRASS
aka *Poa annua, poa*

DIAGNOSTIC TIPS:

Very persistent self-seeding winter annual or biennial

Short, narrow leaf blades with parallel edges and boat-shaped tip

Some leaf blades wavy

Germinates in late summer/early fall

Shallow-rooted, dying under heat or moisture stress

STRUCTURAL CHARACTERISTICS:

Leaf in bud: folded

Collar: narrow top pinched

Ligule: medium pointed

DISTRIBUTION:

Indigenous states

SANDBUR

DIAGNOSTIC TIPS:

A mostly prostrate, narrow-leafed summer annual that likes sandy soils

Distinctive yellow seedhead contains 6-20 large, sharply-burred seeds

Burred seeds can cause painful injury to unprotected feet or ankles

STRUCTURAL CHARACTERISTICS:

Leaf in bud: folded

Collar: broad bottom pinched

Ligule: hairy

DISTRIBUTION:

Indigenous states

FOXTAIL BARLEY

aka *squirreltail barley*

DIAGNOSTIC TIPS:

A narrow-leafed prostrate summer annual

Leaf blades coarse to touch, often with sparse, stiff hairs

Seedhead is a single tufted spike

Seed has a 2-3-inch-long hair at pointed end

STRUCTURAL CHARACTERISTICS:

Leaf in bud: folded

Collar: broad bottom pinched

Ligule: tall toothed

DISTRIBUTION:

Indigenous states

GOOSEGRASS
aka *silver crabgrass*

A narrow-leafed dense prostrate summer annual

Leaf color is darker green than most annual monocots

Collar area has sparse long hairs

Seedhead has 2-13 branches which are white to silver in color

STRUCTURAL CHARACTERISTICS:

Leaf in bud: folded

Collar: broad continuous

Ligule: short toothed & divided

DISTRIBUTION:

Indigenous states

BARNYARDGRASS
aka *billion dollargrass, watergrass*

A very wide-bladed semi-prostrate summer annual

Stems may be branched at nodes and frequently bent upright

Seedhead has multiple short perpendicular branches

Seeds are coarse with short burrs

STRUCTURAL CHARACTERISTICS:

Leaf in bud: rolled

Collar width: broad

Ligule height: absent

DISTRIBUTION:

Indigenous states

CHEATGRASS
aka *chess, rye bromegrass*

A narrow-leafed, mostly erect winter annual

Underside of leaf is often hairy

Seedhead is open with multiple semi-erect branches carrying 1-4 seed clusters

Seeds look like cultivated wheat or rye

STRUCTURAL CHARACTERISTICS:

Leaf in bud: rolled

Collar: broad bottom pinched

Ligule: short toothed

DISTRIBUTION:

Indigenous states

GREEN FOXTAIL
aka *green bristlegrass*

A wide-leafed mounded summer annual

Leaf blades are limp, bright green and sharply pointed

Stems bent upright at nodes

Seedhead cylindrical with tufted pale green seeds

STRUCTURAL CHARACTERISTICS:

Leaf in bud: rolled

Collar: narrow continuous

Ligule: hairy

DISTRIBUTION:

Indigenous states

LARGE CRABGRASS
aka *hairy fingergrass*

A wide-bladed prostrate summer annual

Leaves are hairy on both surfaces with a prominent midrib

Older nodes are often branched and rooted where contacting soil

Seedhead open with 4-6 slender branches

STRUCTURAL CHARACTERISTICS:

Leaf in bud: rolled

Collar: broad top pinched

Ligule: tall toothed & pointed

DISTRIBUTION:

Indigenous states

RESCUEGRASS
aka *prairiegrass, rescue brome*

A wide-leafed winter annual or biennial

Leaves are hairy at edges and on upper surface

Seedhead is open with bending slender side branches

Seed clusters look like cultivated wheat or rye

STRUCTURAL CHARACTERISTICS:

Leaf in bud: rolled

Collar: broad bottom pinched

Ligule: tall toothed & pointed

DISTRIBUTION:

Indigenous states

SMOOTH CRABGRASS
aka *fingergrass*

A narrow-leafed prostrate summer annual

Leaves are not hairy except sparsely haired in collar area

Stems branch at nodes, but do not root

Seedhead has 2-6 slender upright branches

STRUCTURAL CHARACTERISTICS:

Leaf in bud: rolled

Collar: broad bottom pinched

Ligule: tall rounded

DISTRIBUTION:

Indigenous states

STINKGRASS

A narrow-leafed annual

Leaves are dull on upper surface and glossy on underside

Collar area has sparse long hairs

Plant has a very disagreeable odor when cut or damaged

STRUCTURAL CHARACTERISTICS:

Leaf in bud: rolled

Collar: narrow continuous

Ligule: hairy

DISTRIBUTION:

Indigenous states

WITCHGRASS

An erect wide-bladed summer annual

Leaves are densely haired on both surfaces

Emerging seedhead is fountain-like

Mature seedhead is large and very open with slender branches carrying single seeds

STRUCTURAL CHARACTERISTICS:

Leaf in bud: rolled

Collar: broad continuous

Ligule: hairy

DISTRIBUTION:

Indigenous states

YELLOW FOXTAIL

An erect wide-bladed summer annual

Upper leaf surface has long hairs in collar area

Leaves are often slightly twisted in an open spiral

STRUCTURAL CHARACTERISTICS:

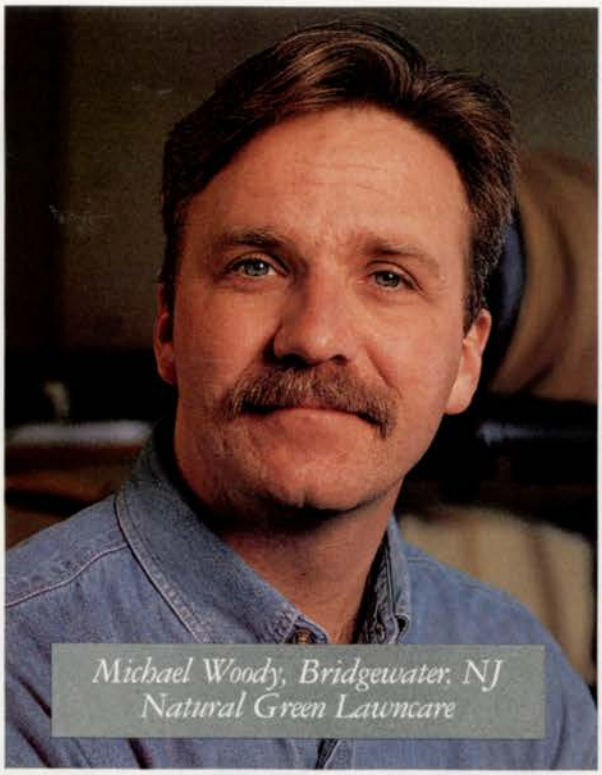
Leaf in bud: rolled

Collar: narrow top pinched

Ligule: hairy

DISTRIBUTION:

Indigenous states



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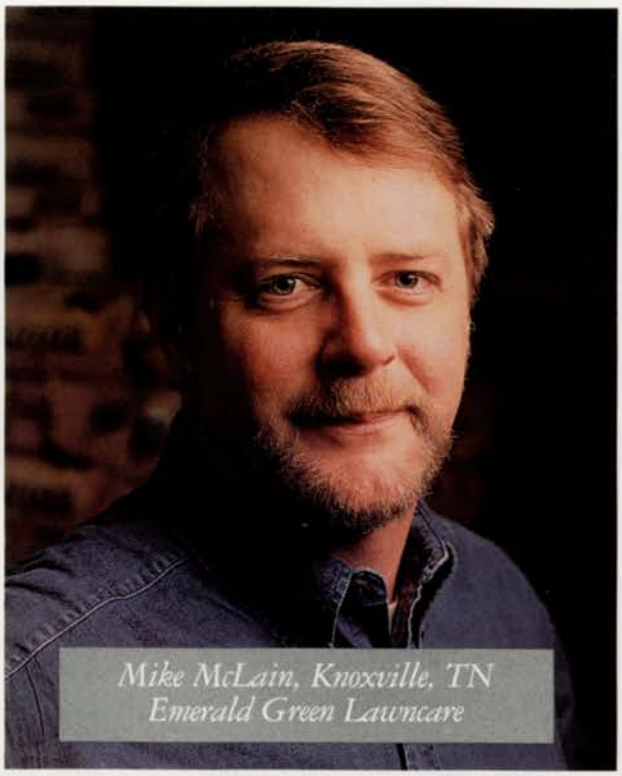

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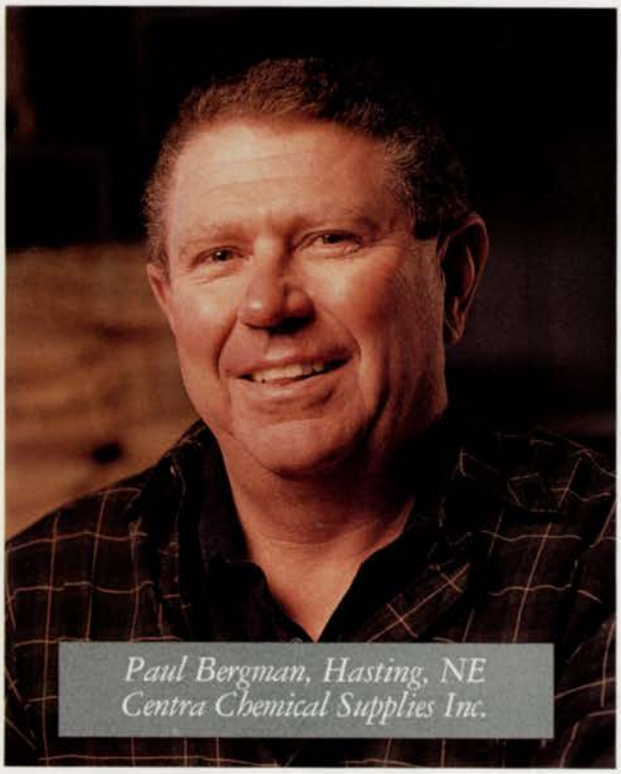

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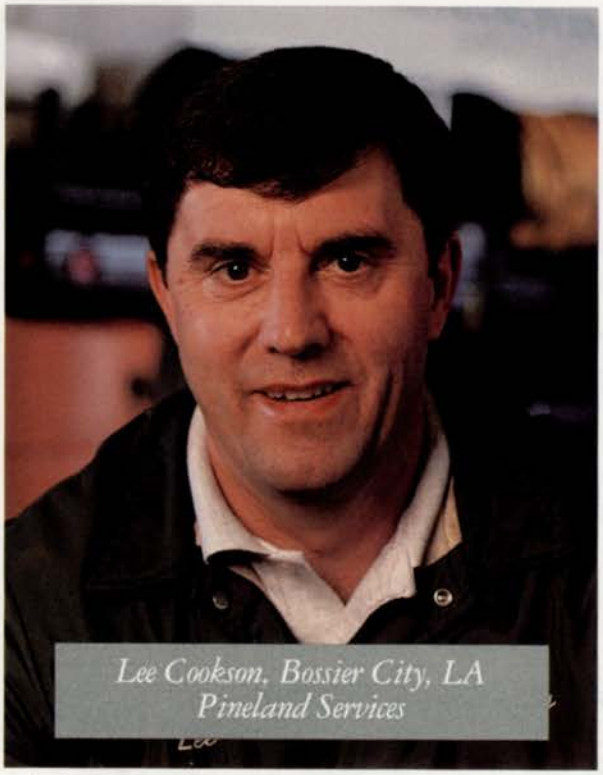

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DOWNY BROME
aka *drooping bromegrass*

An erect narrow-bladed winter annual

Leaves have dense soft hairs on both surfaces

Seedhead is open with drooping branches

Seed clusters are tufted and look like cultivated wheat or rye

STRUCTURAL CHARACTERISTICS:

Leaf in bud: rolled

Collar: narrow bottom pinched

Ligule: medium toothed & pointed

DISTRIBUTION:

Indigenous states

FALL PANICUM
aka *smooth witchgrass*

A very wide-bladed mostly prostrate summer annual

Leaves may be hairy on upper surface, are glossy beneath and sharply pointed

Stems branched at nodes and bent upright

Seedhead is open with multiple very slender branches

STRUCTURAL CHARACTERISTICS:

Leaf in bud: rolled

Collar: broad continuous

Ligule height: hairy

DISTRIBUTION:

Indigenous states

WILD OAT
aka *wild oats*

An erect wide-bladed annual

Plant often turns brown in summer as seed matures

Collar area has sparse short hairs

Stems are stiff

Seedhead is open with multiple branches carrying many single drooping seeds

STRUCTURAL CHARACTERISTICS:

Leaf in bud: rolled

Collar: narrow bottom pinched

Ligule: tall toothed

DISTRIBUTION:

Indigenous states

SOUTHERN CRABGRASS
aka *summergrass*

A wide-bladed prostrate summer annual

Leaves may be hairy on upper surface

Stems will root at nodes

Collar area has sparse long hairs

Seedhead has 2-9 slender branches

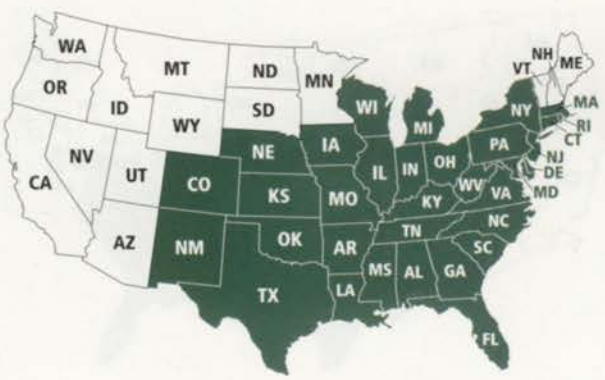
STRUCTURAL CHARACTERISTICS:

Leaf in bud: rolled

Collar: broad

Ligule: medium toothed & pointed

DISTRIBUTION:



Indigenous states

MONOCOTS *Perennial*

DALLISGRASS
aka *paspalum*

A warm-season coarse semi-erect spreading perennial

Collar area has hairs on upper leaf surface and at leaf edges

Seedhead has 3-7 right-angled slender branches

Roots may have short rhizomes

STRUCTURAL CHARACTERISTICS:

Leaf in bud: rolled

Collar: broad

Ligule: tall

DISTRIBUTION:

Indigenous states

BROOMSEDGE

A very narrow-leafed erect perennial

Collar area has hairs on upper leaf surface and on leaf edges

Seedhead is upright with white feather-like tufts

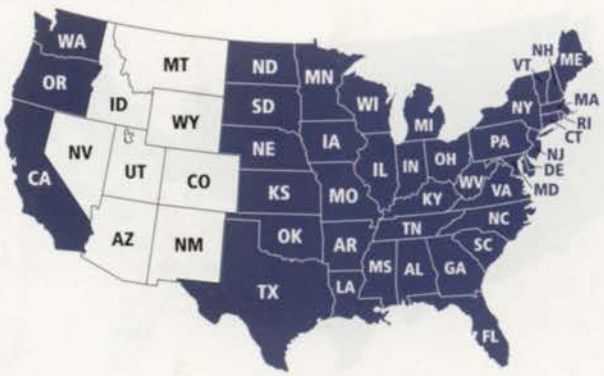
STRUCTURAL CHARACTERISTICS:

Leaf in bud: folded

Collar: narrow continuous

Ligule: short with hairs

DISTRIBUTION:



Indigenous states

QUACKGRASS

An erect narrow-leafed aggressive perennial

Leaf is rough on upper surface

Collar area has claw-like fleshy appendages (auricles) that clasp stem

Plant develops multiple rhizomes from base of plant

Seedhead is a single slender spike

STRUCTURAL CHARACTERISTICS:

Leaf in bud: rolled

Collar: broad continuous

Ligule: short

DISTRIBUTION:

Indigenous states

JOHNSONGRASS

A very wide-bladed aggressively spreading prostrate perennial

Collar area has short hairs on upper surface near ligule

Spreads by multiple ¼-inch-thick rhizomes

STRUCTURAL CHARACTERISTICS:

Leaf in bud: rolled

Collar: broad bottom pinched

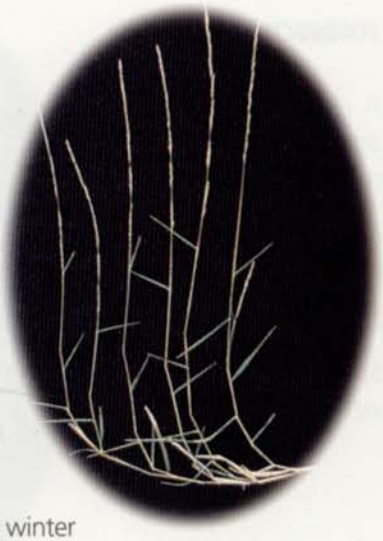
Ligule: tall with hairs

DISTRIBUTION:

Indigenous states

MONOCOTS *Perennial*

NIMBLEWILL



A very short-leafed stemmy spreading perennial herb

Leaves are short

Spreads by very slender stolons

On frequently mowed sites, plant often looks stemmy in fall

Turns off-white during winter

Collar area has long hairs at leaf edge

Seedhead has single, very slender spike

STRUCTURAL CHARACTERISTICS:

Leaf in bud: rolled

Collar: medium top pinched

Ligule: short

DISTRIBUTION:

Indigenous states

KNOTGRASS

A prostrate spreading perennial

Collar area has short hairs at leaf edges and near ligule

Seedhead has two slender upright branches

STRUCTURAL CHARACTERISTICS:

Leaf in bud: rolled

Collar: broad bottom pinched

Ligule: tall rounded

DISTRIBUTION:

Indigenous states

YELLOW NUTSEDGE
aka *yellow nutgrass*

A very rapidly growing erect perennial herb

Spreads by rhizomes with underground tubers

Leaves are v-shaped with a prominent midrib tapering to a sharp point

Stems are triangular

Seedhead is semi-open, carrying yellow seeds

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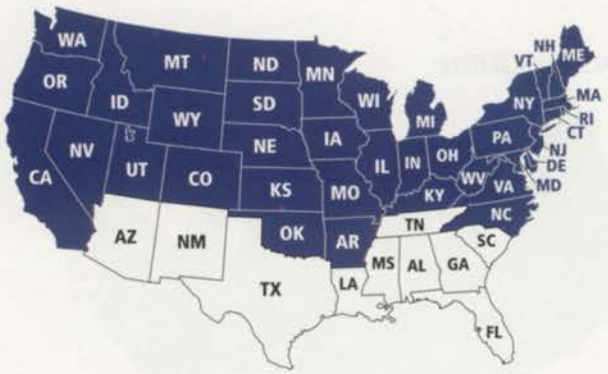

Indigenous states

PURPLE NUTSEDGE
aka *purple nutgrass*

Rapidly growing erect perennial herb

Spreads by rhizomes with underground tubers

Stems are triangular

Leaves are v-shaped, tapering to a sharp point

Seedhead is open, carrying dark or purple seeds

DISTRIBUTION:

Indigenous states

Dicot weeds

In a universe of hundreds of dicot weeds, a limited number can tolerate repeated mowing of managed turf sites. In order to provide a broader representation of turf weeds, we have included a select number of these dicot weeds. Those presented herein were chosen for their ability to survive in turf, often as a continuing pest. Several of the species can persist even at fairly short mowing heights; others are active in cool weather.

Identifying a dicot weed

Unlike the prototypical size and shape of monocot weeds, the shape and vegetative growth habits of many dicot weed groups are visually unique. Also, the distinctive traits of monocots—seedheads, ligules and collars—are not always present, making visual identification more important.

We suggest the following process for identifying dicot weeds:

- Look for a sample flower if available
- Leaves: check for identifying characteristics (size, shape, notches, venation or coloration)
- Stems: check how the leaves are held (opposite or alternate), shape and color
- Flowers: check color, size and composition (single, double or compound)
- Location: take note of the conditions in which the weed is growing (shade, compacted soil, etc.)
- Distribution: confirm that this weed species has been identified in your state

DANDELION
aka *common dandelion*

A large rosette-type perennial herb

Leaves growing from plant base are long, narrow and deeply notched

Points of leaf lobes point backward toward base of plant

Has large, slightly mounded yellow flowers on hollow stems

Mature seedhead is a round puffball with seeds that are easily dislodged

DISTRIBUTION:

Indigenous states

HENBIT
aka *dead-nettle*

A mostly erect winter annual or biennial

Leaves are similar to mint: rounded, toothed, heavily veined with soft hairs on top, held opposite on square stems

Single flowers are trumpet-shaped, pale purple and project from ends of stems

Seen primarily in spring, dying with heat

DISTRIBUTION:

Indigenous states

KNOTWEED
aka *prostrate knotweed*

- A persistent low-growing summer annual
- Prefers compacted soil of pathways and along drives
- Leaves are blue-green, up to 1 inch long and ¼-inch wide
- Small single white to pink flowers are found at the junction of the leaves and the stem

DISTRIBUTION:

Indigenous states

DICOTS

PURSLANE
aka *common purslane*

A prostrate, succulent summer annual

Leaves are shiny green, wedge-shaped, thick and up to 1 inch long

Stems are thick, fleshy and purple to brown in color

Plants are are very drought-resistant

Small, single yellow flowers may appear in the leaf clusters at end of stems

DISTRIBUTION:

Indigenous states

COMMON CHICKWEED
aka *starwort, winterweed*

A low-growing winter annual

Plant prefers shaded moist sites

Opposite small leaves are carried on tender stems

Stems may root at leaf nodes

Small compound flower composed of 5 pairs of two pale purple petals

Plants die back with summer heat, but can survive year round at cool sites

DISTRIBUTION:

Indigenous states

SPOTTED SPURGE

A prostrate fleshy summer annual herb

Leaves are opposite, oblong, and up to ¾-inch long

Upper leaf surface has a purple to brown blotch along center vein

Hairy stems produce a milky-white sap when broken

DISTRIBUTION:

Indigenous states

ACKNOWLEDGMENTS

This guide was written and compiled by Chris Sann of Turf Information Group, Inc., Wilmington, Delaware. Sann is a former lawn care operator and green industry newsletter publisher with 20 years experience in the industry.

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The "LANDSCAPE MANAGEMENT Weed Identification Guide" presented as a service to the green industry by American Cyanamid of Wayne, N.J. and LANDSCAPE MANAGEMENT magazine of Cleveland, Ohio.

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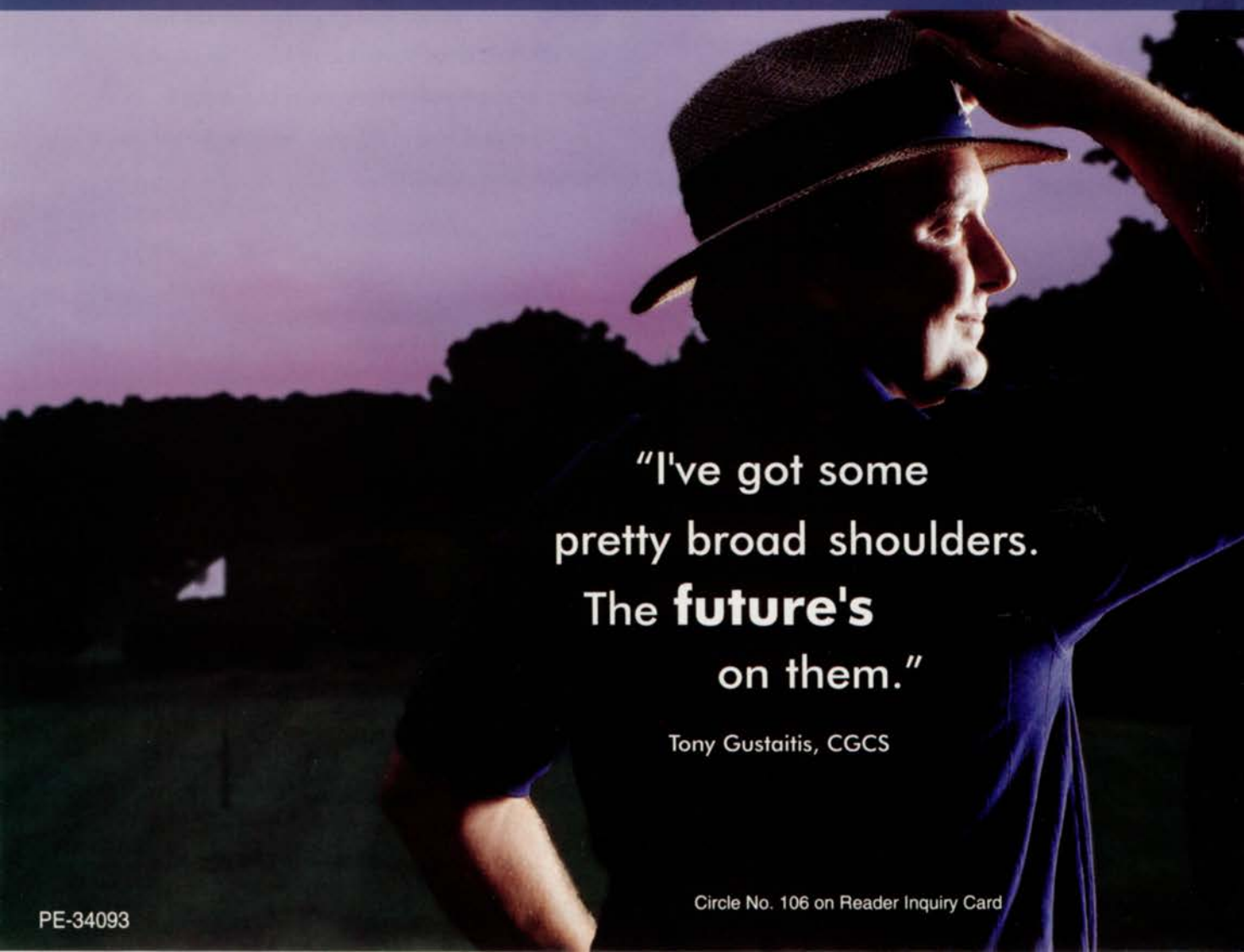

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